AMENDMENTS TO THE CLAIMS

1. (Originally Presented) Digital circuit multiplication equipment having a tandem passthrough function of carrying out passthrough transmission of a coded speech signal, and a variable bit rate function of varying a transmission bit rate of the coded speech signal in accordance with a load on the equipment, said digital circuit multiplication equipment comprising:

dummy data adding means for generating a pseudo-speech signal with a predetermined transmission bit rate by adding dummy data including coding bit rate information to a coded speech signal supplied from a transmission line, and for supplying the pseudo-speech signal to a tandem circuit switch; speech signal extracting means for extracting a coded speech signal from a pseudo-speech signal supplied from said tandem circuit switch;

bit rate identification information adding means for adding bit rate identification information to the coded speech signal extracted by said speech signal extracting means; and

speech signal output means for selecting, with reference to coding bit rate information included in the pseudo-speech signal, one of the coded speech signal extracted by said speech signal extracting means and the coded speech signal including the bit rate identification information added by said bit rate identification information adding means, and for delivering the selected coded speech signal to the transmission line.

2.    (Originally Presented)    Digital circuit multiplication equipment having a tandem passthrough function of carrying out passthrough transmission of a coded speech signal, and a variable bit rate function of varying a transmission bit rate of the coded speech signal in accordance with a load on the equipment, said digital circuit multiplication equipment comprising:

message notifying means for supplying a transmission line with a message indicating a trunk channel in a passthrough state; and

bit rate fixing means for fixing, when receiving a message indicating a trunk channel in a passthrough state from the transmission line, a transmission bit rate of a coded speech signal on the trunk channel indicated by the message to a predetermined bit rate.

3.    (Originally Presented)    The digital circuit multiplication equipment according to claim 2, wherein when said message notifying means outputs the message, it utilizes a bearer channel number in a message channel assigned to the transmission line.

4.    (Originally Presented)    The digital circuit multiplication equipment according to claim 2, wherein when said message notifying means outputs the message, it utilizes a trunk channel number in a message channel assigned to the transmission line.

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5.   (Originally Presented)   Digital circuit multiplication equipment having a tandem passthrough function of carrying out passthrough transmission of a coded speech signal, and a variable bit rate function of varying a transmission bit rate of the coded speech signal in accordance with a load on the equipment, said digital circuit multiplication equipment comprising:

detecting means for detecting a start of a passthrough operation of a trunk channel;

assignment means for assigning the trunk channel that starts the passthrough operation to a passthrough clique or a bit bank; and

speech signal output means for transmitting a coded speech signal on the trunk channel through the passthrough clique or the bit bank assigned by said assignment means.


6.   (Originally Presented)   The digital circuit multiplication equipment according to claim 5, wherein the clique consists of a series of data sequences consisting of a message channel and a plurality of bearer channels, and the bit bank consists of a series of data sequences forming a dedicated transmission line using a plurality of bearer channels.

7.  (Originally Presented)  The digital circuit multiplication equipment according to claim 1, further comprising load measuring means for measuring a load imposed on the equipment, wherein said speech signal output means carries out the selection of the coded speech signal only when the load on the equipment exceeds a predetermined threshold value.

8.  (Originally Presented)  The digital circuit multiplication equipment according to claim 7, wherein said load measuring means consists of a message number supervisor for measuring a number of messages on a message channel assigned to the transmission line.

9.  (Originally Presented)  The digital circuit multiplication equipment according to claim 7, wherein said load measuring means consists of a speech activity channel number supervisor for measuring a number of trunk channels in a speech active state.

10.  (Originally Presented)  The digital circuit multiplication equipment according to claim 7, wherein said load measuring means consists of a bearer occupancy rate supervisor for measuring a bearer occupancy rate of the transmission line.

11.  (Currently Amended)  The digital circuit multiplication equipment according to claim 1, further comprising information

reduction means for reducing information amount of the coded speech signal extracted by said speech signal extracting means, wherein said speech signal output means selects one of three coded speech signals consisting of the coded speech signal extracted by said speech signal extracting means, the coded speech signal including the bit rate identification information added by said bit rate identification information adding means, and the coded speech signal whose information amount is reduced by said information reduction means.

12.    (New)    A method for providing variable bit rate communications, comprising:

receiving pseudo-coded data over a trunk channel, wherein the pseudo-coded data includes first control data indicating said receiving is associated with a passthrough state;

restoring variable bit rate coded data from the pseudo-coded data;

modifying a data rate of the variable bit rate coded data; and

selecting one of the variable bit rate coded data and the modified variable bit rate coded data for transmission over a bearer channel, wherein the selection is based upon second control data.

13.    (New)    The method according to claim 12, wherein the second control data includes assignment data, and further comprises:

augmenting the variable bit rate coded data by inserting bit rate identification data, wherein the augmenting changes the data rate of the variable bit rate coded data; and

selecting the augmented data based upon the assignment data.

14.    (New)    The method according to claim 12, wherein the second control data includes message information, and further comprises:

determining a number of messages on a bearer channel; and

selecting the data rate of the variable bit rate coded data based upon the number.

15.    (New)    The method according to claim 12, wherein the second control data includes trunk channel information, and further comprises:

determining a number of trunk channels in a speech active state; and

selecting the data rate of the variable bit rate coded data based upon the number.

16. (New) The method according to claim 12, further comprising:

determining a bearer occupancy rate of the bearer channel; and

selecting the data rate of the variable bit rate coded data based upon the bearer occupancy rate.

17. (New) The method according to claim 13, further comprising:

reducing an information amount from the variable bit rate coded data; and

selecting one of variable bit rate coded data, augmented variable bit rate coded data, and reduced variable bit rate coded data based upon the assignment data.

18. (New) A method for providing variable bit rate communications, comprising:

determining when a trunk channel is in a passthrough state;

providing a message over a bearer channel, wherein the message indicates the trunk channel is in the pass-through state;

receiving variable bit rate coded data, wherein the bit rate is fixed based upon the message; and

transforming the variable bit rate data into pseudo-coded data; and

providing the pseudo-coded data over the trunk channel.

19.   (New)   A method for providing variable bit rate communications, comprising:

determining when a trunk channel is in a pass-through state;

fixing the bit rate of variable bit rate coded data;

assigning the trunk channel to a data structure associated with a bearer channel, wherein the data structure contains the fixed variable bit rate coded data; and

providing the data structure over a bearer channel.

20.   (New)   The method according to claim 19, wherein the data structure is a passthrough clique which includes a series of data sequences having a message channel and a plurality of bearer channels.

21.   (New)   The method according to claim 19, wherein the data structure includes a bit bank which includes a series of data sequences forming a dedicated transmission channel using a plurality of bearer channels.

22.   (New)   An apparatus for providing variable bit rate communications having a tandem passthrough function, comprising:

a pseudo-speech signal generator for providing a pseudo-speech signal having a predetermined transmission bit rate;

a pseudo-speech signal control information inserting section operatively connected to the pseudo-speech signal generator, wherein the pseudo-speech signal control information inserting section adds dummy data including coding bit rate information;

a first selector for providing data over a trunk channel operatively connected to the pseudo-speech signal control information inserting section and a speech decoder, wherein the first selector switches between one of the pseudo-speech signal for tandem passthrough operation and a decoded speech signal;

a transmission bit rate restorer for extracting a coded speech signal from the pseudo-speech signal received over the trunk channel;

a coding bit rate information adding section which receives the coded speech signal from the transmission bit rate restorer, and adds bit rate information to the coded speech signal to produce an augmented coded speech signal, wherein the augmented coded speech signal has an different bit rate from the bit rate of the coded speech signal; and

a second selector for providing information over a bearer channel operatively connected to the transmission bit rate restorer and the coding bit rate information adding section, wherein the second selector switches between one of the extracted coded speech signal and the augmented coded speech signal.

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23.    (New) An apparatus for providing variable bit rate communications having a tandem passthrough function, comprising:

a pseudo-speech signal generator for providing a pseudo-speech signal having a predetermined transmission bit rate;

a pseudo-speech signal control information inserting section operatively connected to the pseudo-speech signal generator, wherein the pseudo-speech signal control information inserting section adds dummy data including coding bit rate information;

a first selector for providing data over a trunk channel operatively connected to the pseudo-speech signal control information inserting section and a speech decoder, wherein the selector switches between one of the pseudo-speech signal for tandem passthrough operation and a decoded speech signal;

a tandem notification message generator which supplies a bearer channel with a message indicating a trunk channel is in a passthrough state; and

an assignment controller operatively connected to the tandem notification message generator, wherein the assignment controller fixes a transmission bit rate of a coded signal on the trunk channel indicated by the message.